



GUIDE TO EVIDENCE-BASED PREVENTION

Evidence inventory

APRIL 2016

Strategies to increase food security and access to healthy food and prevent obesity, cardiovascular disease and diabetes

Sources and outcomes

This inventory lists strategies to increase food security and access to healthy food from:

- **The Guide to Community Preventive Services (Community Guide):** Systematic reviews from the U.S. Centers for Disease Control and Prevention (CDC)
- **U.S. Preventive Services Task Force (USPSTF) Recommendations:** Systematic reviews from the Agency for Healthcare Research and Quality (AHRQ)
- **What Works for Health:** Evidence registry from County Health Rankings and Roadmaps (CHR&R), a project of the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation
- **The Nutrition Evidence Library:** Systematic reviews on specific nutrition topics from the U.S. Department of Agriculture (USDA)

Strategies with a food security component were assessed for their effectiveness in achieving one or more of the following outcomes:*

- Increased food security
- Increased healthy foods in food deserts
- Strengthened local and regional food systems
- Increased earnings

Strategies without a food security component were assessed for their effectiveness in achieving one or more of the following outcomes:**

- Improved food environment (community and school)
- Increased access to, willingness to try and consumption of fruits and vegetables
- Reduced food costs
- Increased healthy food access, purchasing and consumption
- Reduced unhealthy food access, purchasing and consumption
- Improved dietary habits, dietary choices and nutrition
- Reduced obesity rates and improved weight status
- Increased awareness of calories purchased and reduced calories purchased
- Reduced sweetened beverage consumption and increased water consumption
- Improved glucose tolerance, fasting glucose, blood pressure and cholesterol
- Delayed or reduced risk for type 2 diabetes

*What Works for Health ratings refer to strength of evidence for "expected beneficial outcomes" or "other potential beneficial outcomes."

**Expected outcomes listed come from one or more of the sources analyzed in the inventory. Outcomes from What Works for Health refer to strength of evidence for "expected beneficial outcomes" only.

Recommendation levels key

Community Guide (CDC)	What Works for Health (CHR&R)	USDA Nutrition Evidence Library	U.S. Preventive Services Task Force (AHRQ)
Recommended	Scientifically Supported	Grade I: Strong	Grade A (recommended; high certainty of benefit)
Insufficient Evidence	Some Evidence	Grade II: Moderate	Grade B (recommended; moderate certainty of benefit)
Recommended Against	Expert Opinion	Grade III: Limited	Grade C (recommended selectively; moderate certainty of small benefit)
	Insufficient Evidence	Grade IV: Grade not assignable — Insufficient evidence	I Statement (insufficient evidence)
	Mixed Evidence	Grade IV: Grade not assignable — Recommended against	Grade D (recommended against; moderate certainty of harm or no net benefit)
	Evidence of Ineffectiveness		

Color key

Stronger evidence of effectiveness



Likely to decrease disparities key



The Community Guide and/or What Works for Health have indicated that the strategy is likely to decrease disparities (including racial/ethnic, socioeconomic, geographic or other disparities) based upon the best available evidence.

Color key

Stronger
evidence of
effectiveness



Policy or systems change	Program or campaign	Clinical preventive service	Likely to decrease disparities	CHR&R	USDA	CDC	AHRQ
				What Works for Health Accessed April 2016***	Nutrition Evidence Library Accessed April 2016	Community Guide Accessed April 2016***	U.S. Preventive Services Task Force (USPSTF) Recommendations Accessed April 2016***

Interventions with a food security component

1. Housing choice voucher program (Section 8)				★	Some evidence (2016)	Not addressed	Not addressed	Not addressed
2. Rapid re-housing programs				★	Some evidence (2016)	Not addressed	Not addressed	Not addressed
3. Unemployment insurance				★	Some evidence (2014)	Not addressed	Not addressed	Not addressed
4. Community kitchens for food processing					Expert opinion (2015)	Not addressed	Not addressed	Not addressed
5. Food hubs (businesses or other organizations that aggregate, distribute and market local and regional food products)					Expert opinion (2015)	Not addressed	Not addressed	Not addressed
6. School breakfast programs				★	Scientifically supported (2016)	Included in school-based policies (see #35)	Not addressed	Not addressed
7. Healthy school lunch initiatives				★	Some evidence (2015)	Included in school-based interventions (see #34)	Not addressed	Not addressed
8. Community gardens					Some evidence (2016)	Not addressed	Not addressed	Not addressed
9. Healthy food initiatives in food banks				★	Some evidence (2016)	Not addressed	Not addressed	Not addressed
10. Farmers' markets/stands					Some evidence (2015)	Grade IV: Grade not assignable - insufficient evidence (2015)	Not addressed	Not addressed
11. Healthy food in convenience stores					Some evidence (2015)	Grade IV: Grade not assignable - insufficient evidence (2015)	Not addressed	Not addressed
12. Urban agriculture				★	Expert opinion (2016)	Not addressed	Not addressed	Not addressed
13. Mobile markets				★	Expert opinion (2015)	Not addressed	Not addressed	Not addressed
14. Food buying clubs and co-ops					Expert opinion (2014)	Not addressed	Not addressed	Not addressed

***These sources are periodically updated, including the evidence ratings and the disparity ratings. Year in parentheses is year review was published.

Note: Click on bold, blue column header above (What Works for Health, Nutrition Evidence Library, Community Guide and USPSTF) for a description and outcomes assessed for each strategy.

	Policy or systems change	Program or campaign	Clinical preventive service	Likely to decrease disparities	CHR&R What Works for Health Accessed April 2016***	USDA Nutrition Evidence Library Accessed April 2016	CDC Community Guide Accessed April 2016***	AHRQ U.S. Preventive Services Task Force (USPSTF) Recommendations Accessed April 2016***
15. Fruit and vegetable gleaning initiatives (gathering produce left in the field or left over after farmers' markets to deliver to food banks or other community organizations)				★	Expert opinion (2016)	Not addressed	Not addressed	Not addressed
16. Community kitchens for nutrition education				★	Insufficient evidence (2015)	Not addressed	Not addressed	Not addressed
17. Community supported agriculture					Expert opinion (2016)	Not addressed	Not addressed	Not addressed
Interventions without a food security component								
18. School nutrition standards				★	Scientifically supported (2016)	Included in school-based policies (see #35)	Not addressed	Not addressed
19. Competitive pricing for healthy foods					Scientifically supported (2015)	Included in school-based policies (see #35) and worksite programs (see #33)	Not addressed	Not addressed
20. School food and beverage restrictions					Some evidence (2014)	Included in school-based policies (see #35)	Not addressed	Not addressed
21. Restaurant nutrition labeling					Some evidence (2014)	Grade III: Limited (2015)	Not addressed	Not addressed
22. Healthy vending machine options					Some evidence (2015)	Included in worksite programs (see #33)	Included in worksite programs (see #33)	Not addressed
23. School fundraiser restrictions					Expert opinion (2014)	Included in school-based policies (see #35)	Not addressed	Not addressed
24. Sugar-sweetened beverage taxes				★	Some evidence (2015)	Not addressed	Not addressed	Not addressed
25. Child-focused advertising restrictions for unhealthy foods and beverages					Some evidence (2015)	Not addressed	Not addressed	Not addressed
26. Unhealthy snack taxes				★	Some evidence (2015)	Not addressed	Not addressed	Not addressed
27. Healthy foods at catered events					Expert opinion (2014)	Included in worksite programs (see #33)	Not directly addressed, some overlap with #33	Not addressed

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28. Electronic Benefit Transfer (EBT) payment at farmers' markets				★	Expert opinion (2015)	Not addressed	Not addressed	Not addressed
29. New grocery stores in low income areas				★	Expert opinion (2015)	Not addressed	Not addressed	Not addressed
30. Zoning regulations for fast food					Expert opinion (2014)	Not addressed	Not addressed	Not addressed
31. Zoning regulations for chickens and bees					Expert opinion (2014)	Not addressed	Not addressed	Not addressed
32. Behavioral interventions that aim to reduce recreational sedentary screen time among children					Scientifically supported (2015)	Grade I: Strong (Source CG-2014)	Recommended (2014)	Not addressed
33. Obesity prevention and control worksite programs					Scientifically supported (2014)	Grade II: Moderate (2015)	Recommended (2007)	Not addressed
34. Multi-component school-based obesity prevention interventions					Scientifically supported (2014)	Grade II: Moderate (2015)	Not directly addressed, some overlap with #43	Not addressed
35. School-based policies					Not directly addressed, some overlap with #18, 20, 23, 34, 38 and 45	Grade I: Strong (2015)	Not addressed	Not addressed
36. Nutrition and physical activity interventions in preschool and childcare					Scientifically supported (2015)	Grade II: Moderate (2015)	Not addressed	Not addressed
37. Financial rewards for employee healthy behavior					Some evidence (2014)	Included in worksite programs (see #33)	Included in worksite programs (see #33)	Not addressed
38. Farm-to-school programs					Some evidence (2015)	Included in school-based interventions (see #34)	Not addressed	Not addressed

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39. School-based nutrition education programs					Some evidence (2014)	Included in school-based interventions (see #34)	Not directly addressed, some overlap with #43 and #48	Not addressed
40. Water availability and promotion interventions					Some evidence (2015)	Not addressed	Not addressed	Not addressed
41. WIC and senior farmers' market nutrition programs				★	Some evidence (2014)	Not addressed	Not addressed	Not addressed
42. Point of purchase prompts for healthy foods					Some evidence (2015)	Included in worksite programs (see #33)	Included in worksite programs (see #33)	Not addressed
43. School-based programs promoting nutrition and physical activity					Not directly addressed, some overlap with #39	Included in school-based interventions (see #34)	Insufficient evidence (2003)	Not addressed
44. Multi-component obesity prevention interventions					Scientifically supported (2014)	Not addressed	Not addressed	Not addressed
45. School fruit and vegetable gardens					Scientifically supported (2015)	Included in school-based interventions (see #34)	Not addressed	Not addressed
46. Fruit and vegetable taste testing					Some evidence (2014)	Not addressed	Not addressed	Not addressed
47. Community weight loss challenges					Expert opinion (2015)	Not addressed	Not addressed	Not addressed
48. Obesity prevention and control school-based programs					Not directly addressed, some overlap with #34	Included in school-based interventions (see #34)	Insufficient evidence (2003)	Not addressed
49. Online grocery stores					Insufficient evidence (2014)	Not addressed	Not addressed	Not addressed
50. Nutrition prescriptions					Expert opinion (2015)	Not addressed	Not addressed	Not addressed

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	Policy or systems change	Program or campaign	Clinical preventive service				
			Likely to decrease disparities				

Interventions with a primary focus on obesity, cardiovascular disease or diabetes

51. Combined diet and physical activity promotion programs to prevent type 2 diabetes among people at increased risk (including the Diabetes Prevention Program)				Not addressed	Not addressed	Recommended (2014)	Not directly addressed, some overlap with #57
52. Provider-oriented obesity prevention and control interventions (provider education, feedback, reminders, education with a client intervention, multicomponent interventions and multicomponent interventions with client interventions)				Not addressed	Not addressed	Insufficient evidence (multiple reviews 2007- 2008)	Not addressed
53. Obesity in adults: Screening and management				Not addressed	Not directly addressed, some overlap with #58	Not directly addressed, some overlap with #54	Grade B: Recommended, moderate benefit (2012)
54. Technology-supported multicomponent coaching or counseling interventions to reduce weight and maintain weight loss				Not addressed	Not addressed	Recommended (2009)	Not directly addressed, some overlap with #53

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55. Healthful diet and physical activity for cardiovascular disease prevention in adults with cardiovascular risk factors: Behavioral counseling					Not addressed	Not addressed	Not addressed	Grade B: Recommended, moderate benefit (2014)
56. Obesity in children and adolescents: Screening					Not addressed	Not addressed	Not addressed	Grade B: Recommended, moderate benefit (2010)
57. Abnormal blood glucose and type 2 diabetes mellitus: Screening					Not addressed	Not addressed	Not directly addressed, some overlap with #51	Grade B: Recommended, moderate benefit (2015)
58. Self-monitoring strategies and body weight monitoring					Not addressed	Grade II: Moderate (2015)	Not directly addressed, some overlap with #54	Not directly addressed, some overlap with #53
59. Healthful diet and physical activity for cardiovascular disease prevention in adults: Behavioral counseling					Not addressed	Not addressed	Not addressed	Grade C: Recommended selectively (2012)

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Abbreviations

- **CHR&R:** County Health Rankings and Roadmaps (a project of the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation)
- **AHRQ:** Agency for Healthcare Research and Quality
- **CDC:** Centers for Disease Control and Prevention
- **USDA:** U.S. Department of Agriculture
- **WIC:** Women, Infants and Children nutrition program

Key additional resources — Reports and recommendations

- **Community Food Security in the United States** (Johns Hopkins Center for a Livable Future, 2015): In-depth scientific review of food insecurity data in the U.S., including reviews of interventions to improve food security
- **Nutrition-Related Policy and Environmental Strategies to Prevent Obesity in Rural Communities: A Systematic Review of the Literature, 2002–2013** (Calancie L, Leeman J, Jilcott Pitts SB, Khan LK, Fleischhacker S, Evenson KR, et al., 2015): Review of obesity prevention-focused policy and environmental change strategies implemented specifically in rural settings
- **Making the Case to Stakeholders: Linking Policy and Environmental Strategies to Health Outcomes** (YMCA of the USA, 2011): Guide to scientific evidence supporting strategies focusing on changing policies, systems and environments to increase healthy behaviors
- **Interventions for preventing obesity in children** (Cochrane, 2011): Large review of childhood obesity interventions and outcomes
- **Ohio's Plan to Prevent and Reduce Chronic Disease: 2014-2018** (Ohio Chronic Disease Collaborative, 2014): Plan document with strategies and objectives to reduce chronic disease risk factors

Key additional resources — Searchable databases and interactive tools

- **Center for Training and Research Translation:** Interactive tool to find evidence-based, healthy lifestyle interventions, with additional information on implementation
- **Academy of Nutrition and Dietetics Evidence Analysis Library:** Searchable database of nutrition research literature, including evidence grading and reviews
- **CDC Community Health Improvement Navigator Database of Interventions:** Searchable database for evidence-based interventions across four action areas: socioeconomic factors, physical environment, healthy behaviors and clinical care



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In addition to this publication, HPIO has developed a series of tools that are posted on the HPIO website, including **Navigating Sources of Evidence**, a guide to help policymakers, community health improvement planners and philanthropy to find prevention strategies that have been carefully evaluated and found to be effective.

www.hpio.net/tools/health-policy-tools/guide-to-evidence-based-prevention



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